

ZONATE LEAF SPOT IN FLORIDA

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Zonate leaf spot is caused by the fungus, *Cristulariella pyramidalis* Waterman and Marshall. It was first described in 1949 on leaves of several maples (*Acer* spp.) in the northeast (7) and later reported on pecan, *Carya illinoensis* Koch from Georgia and Alabama in 1969 (4) and from Florida in 1971 (8). Zonate leaf spot was also observed on several other tree hosts in West Virginia and in other mid-Atlantic states in 1962 and 1963 (2). French reported the disease on several genera of shade trees in 1970 and subsequently on a number of other nontree hosts in Florida (3).

SYMPTOMS. Yellowish gray spots showing a series of light brown concentric rings on the upper surface of leaves resulting in a target-like appearance are characteristic of this disease (Fig. 1). The spots are marginate and vary in size, sometimes coalescing (7). Hand lens or microscopic examination may reveal cone or pyramid shaped fruiting structures (sporophores) (Fig. 2) on the lower surface of infected leaves.

ECONOMIC IMPORTANCE. The extensive host range of the pathogen and its ability to spread rapidly under conditions of high moisture and high plant density make the disease a potential threat to the nursery industry of Florida. This disease causes severe leaf injury and defoliation of susceptible plants and minor leaf spotting to more resistant hosts.

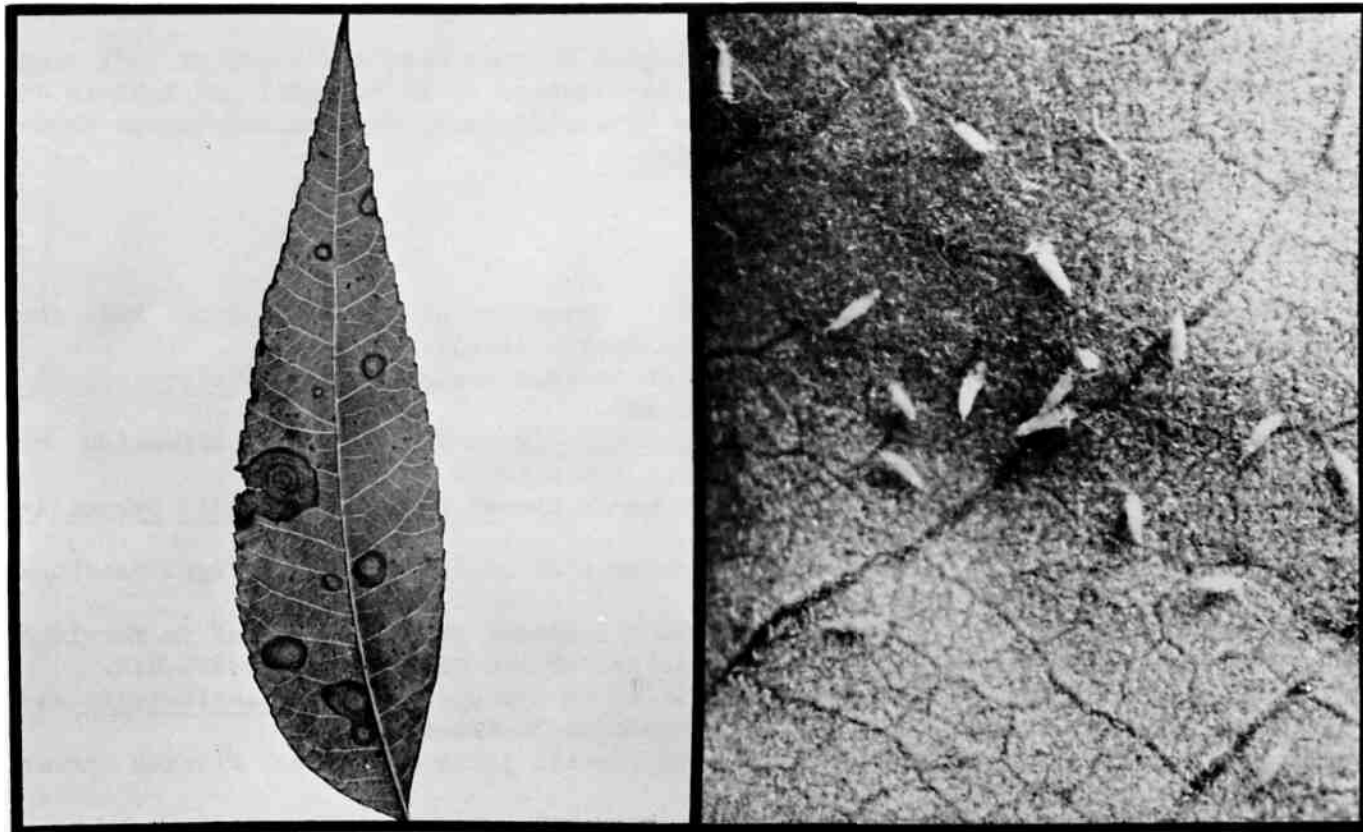


Fig. 1. Zonate leaf spot of pecan.

Fig. 2. Closeup showing pyramidal sporophores.

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DISTRIBUTION IN FLORIDA. *C. pyramidalis* is known to occur on numerous host plants in Jefferson, Leon, and Alachua counties.

Known Host Range of Cristulariella pyramidalis in Florida

Acer platanoides - Norway Maple	Liriodendron tulipifera - Yellow Poplar
Acer rubrum - Red Maple	Malus pumila - Apple
Acer saccharinum - Silver Maple	Parthenocissus sp. - Virgin Ivy
Ailanthus altissima - Tree-of-Heaven	Parthenocissus quinquefolia - Virginia Creeper
Aleurites fordii - Tung	Plantanus acerifolia - London Plane Tree
Alnus hirsuta var. hirsuta - Alder	Prunus persica var. nectarina - Nectarine
Alnus inokumai - Alder	Prunus subhirtella - Japanese Flowering Cherry
Carya illinoensis - Pecan	Ulmus parvifolia - Chinese Elm
Cornus florida - Dogwood	Vitis aestivalis - Summer Grape
Desmodium tortuosum - Beggarweed	
Hibiscus cannabinus - Kenaf	

Known Host Range in Other Eastern States (1,5,6)

Acer negundo - Boxelder Maple	Hibiscus cannabinus - Kenaf
Acer nigrum - Black Maple	Juglans cinerea - Butternut
Acer platanoides - Norway Maple	Magnolia fraseri - Mountain Magnolia
Acer pseudoplatanus - Sycamore Maple	Vaccinium sp. - Blueberry
Acer saccharinum - Silver Maple	Viburnum sp. - Viburnum
Acer saccharum - Sugar Maple	Vitis labrusca - Grape
Carya illinoensis - Pecan	

CONTROL. A satisfactory chemical control program has not been developed at this time. Some fungicides which show promise are tribasic copper (5 lb/100 gal) and Benlate (1/2 to 3/4 lb/100 gal) (8). Avoid buying plants having disease, particularly those showing zonate (target-like) spots on the leaves.

Literature Cited

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